



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,831	01/12/2007	Yasuhiko Nabeshima	288980USOPCT	5494
22850	7590	04/08/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER REDDY, KARUNA P	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			04/08/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/573,831	Applicant(s) NABESHIMA ET AL.	
	Examiner KARUNA P. REDDY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/28/2006, 9/8/2006, 5/15/2007, 11/7/2007, 3/6/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims filed on 3/29/2006 are made of record. Claims 1-11 are currently pending in the application.

Claim Objections

2. Claim 3 is objected to because of the following informalities: Claim 3 (line 2) recites "99.5%by mass" and should read "99.5% by mass". Appropriate correction to the typographical error is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischer et al (US 4,906,696).

Fischer et al disclose transparent thermoplastically processible blends of (A) polycarbonates and (B) methacrylate copolymers (abstract). See example 10 wherein the copolymer is formed from a mixture of 60 parts by weight of methyl methacrylate (MMA), 20 parts by weight of α -methylstyrene (α -MS i.e. an aromatic vinyl monomer), 20

Art Unit: 1796

parts by weight of Phenyl methacrylate (PhMA) and has a molecular weight of 89,000 (column 10, lines 15-31). See example 61, where 90 parts by weight of Makrolon (i.e. polycarbonate resin) and 10 parts by weight of the methacrylate copolymer from example 11 are used to prepare the thermoplastically processible blend. The thermoplastic processing of polycarbonate which has a high melt viscosity as a characteristic of the material, can be facilitated by alloying thermoplastic polymethacrylate plastic without changing substantially the other properties of the polycarbonate (column 7, lines 34-40). Blends of polymeric components (A) and (B) can be processed by injection molding into the widest variety of molded objects (column 7, lines 58-61). The polymers are prepared by known procedures, for the polymerization of α , β -unsaturated monomers, such as suspension polymerization (column 6, lines 36-41).

Therefore, Fischer et al anticipate the present claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 1796

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 4,906,696) in view of Okazaki et al (JP 11-181197).

The discussion with respect to Fischer et al in paragraph 4 above is incorporated here by reference.

Fischer et al are silent with respect to automobile member and lamp cover.

However, Okazaki et al teach polycarbonate composition to which is added a flowability improver comprising a copolymer of aromatic vinyl monomer and monomers having polar groups (abstract). The polycarbonate is widely used as engineering plastic because of excellent transparency and mechanical strength, and can be used to form parts for car and electrical related parts. Therefore, it would have been obvious to one skilled in the art at the time invention was made to injection mold the composition of Fischer et al into automobile parts and electrical parts such as lamp covers, because Fischer et al contemplate injection molding into a wide variety of molded objects and Okazaki teaches that engineering plastics comprising polycarbonate and flowability improver can be molded into electrical and automobile parts, and one skilled in the art would expect the molding of Fischer et al composition into automobile and electrical parts such as lamp covers to work, motivated by expectation of success.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (JP 01-115914) in view of Fischer et al (US 4,906,696).

Art Unit: 1796

Sato et al teach a methacrylic resin comprising 15-75 wt% of phenyl methacrylate, 20-65 wt% aromatic vinyl monomer and 5-30 wt% of other monomer such as acrylonitrile (abstract). See example 2 (Table 1) wherein 30 parts weight of phenyl methacrylate and 50 parts by weight of styrene are polymerized in the presence of chain transfer agent (i.e. mercaptan as molecular weight regulator). The resin formed can be used as a molding material (page 6, lines 13-14).

Sato et al is silent with respect to molecular weight of the copolymer of present claims.

However, Fischer et al teach that compatibility of polymers in blends depends on the degree of polymerization. As a rule compatibility decreases with increased molecular weight and the preferred molecular weight is from 50,00 to 150,000. The copolymer with controlled molecular weight is prepared by polymerization in the presence of molecular weight regulators such as mercaptans (column 6, lines 48-66). Given that the copolymer of Sato et al is prepared in the presence of chain transfer agents such as mercaptans and workability improves when the aromatic vinyl monomer is used in the range of from 20 to 65 wt% of the copolymer, methacrylic resin in example 2 of Sato et al combined with a molecular weight of between 50,000 to 150,000 can be used as a flow improver in the polycarbonate composition of Fischer et al, because Sato et al contemplates use of chain transfer agents to regulate molecular weight and Fischer et al teach that copolymers with a molecular weight of from 50,000 and 150,000 have improved compatibility with other polymers and can function as flow improvers and one skilled in the art would expect copolymer of Sato et al combined with a molecular weight of from 50,000 to 150,000 to work as a flow improver, motivated by expectation of success.

Art Unit: 1796

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. P. R./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796